George Bleekman III

Hands on the Landmarks, Part 2

Entablature and bracket showing paint failure, Villard Hall.

One of the most appealing aspects of a career choice in Historic Preservation is the multi-faceted nature of the field. For some, the attraction lies in advocacy, leading the fight to save our historic resources. For others, the fascination is in survey work and the identification of historic resources. But for me, the thrill is in the restoration: putting the life back into a building that many would say should be discarded. Restoration is a tangible endeavor, for one sees the results on a daily basis, and it is immensely gratifying. Good restoration is a combination of detective work, careful analysis, and conscientious craftsmanship, woven throughout the project. I believe it is the most visible aspect of historic preservation, because it is the beautifully restored building that the public sees and appreciates. Those in the preservation field know how important advocacy and "behind the lines" preservation are, but for the general public the end result is all they really know about, or probably even care about.

As project supervisor and lead carpenter on the restoration of Villard Hall, I recognize the enormous responsibility it takes to undertake such a restoration. Villard Hall, finished in 1886, is one of two National Historic Landmarks on the University of Oregon's campus, and was the second building to be built on campus (Deady Hall, 1876, was the first building on campus, and is the other Landmark). Villard Hall, one of Oregon's finest architectural gems, was designed by noted Oregon architect Warren Heywood Williams and is a late example of the second empire style, one of the few remaining academic buildings of that style left on a western American campus. We, as restoration professionals, bear the responsibility of passing landmarks like Villard Hall on to future generations. This means that our intervention must preserve its historical integrity and craftsmanship, because that is what we are passing on.

Named after Henry Villard, a railroad tycoon and early benefactor of the University, Villard Hall is a rather squat, three-story brick building finished with stucco molded to simulate stone, and a wooden mansard roof with tower pavilions on each of the four corners. Although the interior has suffered much alteration, the exterior is intact except for an addition on the west side connecting Villard to the adjacent Robinson Theater, and the removal of the lower cornice balustrade on the east, south and west facades. Ornate wooden carvings, turnings and mouldings decorate the building and are finished in sand paint meant to simulate stone, and the cedar shingles are painted dark grey to simulate slate.

Villard Hall. Photo courtesy University of Oregon Archives.

The restoration of Villard began seven years ago in a piecemeal fashion, when restoration contractor Gregg Olson and a group of architecture and historic preservation students restored the east porch. Two years later the restoration continued with Olson and another group of students restoring the northeast tower, and four years ago the north-west tower was restored. The current phase of restoration began in

November of 1994 with the east wall, southeast tower and south wall, and will continue with the southwest tower and west wall. The current restoration team is made up of Project Manager James Wentworth, myself, three Physical Plant restoration carpenters, Steve Parker, JR Vanderburg, and Jeff Urban, and sheet metal worker Art Corliss. In addition to this core restoration team are architecture and historic preservation students who are able to gain valuable “hands-on” experience under the direction of the restoration team. This experience is made possible by a unique partnership between the Physical Plant and the University of Oregon Historic Preservation Program that allows up to 10 students per term to work and learn alongside the restoration team. This unique partnership gives students a rare opportunity to participate in the restoration of an NHL, as well as to develop restoration skills and principles.

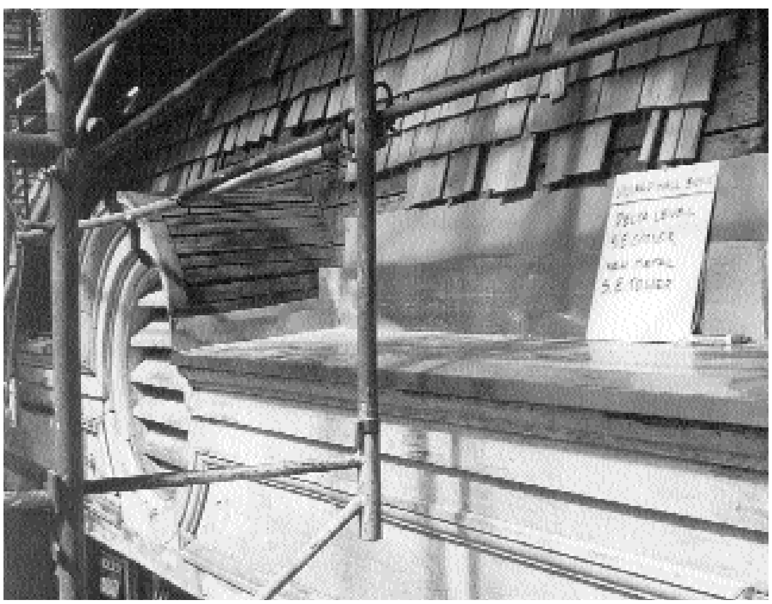
Because of a poor maintenance history on the part of the university, Villard is in a serious state of disrepair. Although the masonry and stucco are for the most part quite stable, it is the wooden portions of the building that have suffered the most damage. Much of the cedar trim and moulding is badly deteriorated, and the original cedar shingles on the mansard roof are in dire need of replacement. In addition, the original terne plate roofing on the gutters, parapet and mansard roof has failed, allowing water to enter the building and accelerating deterioration (the terne-plate had been coated with bituminous roofing tar that contributed to its deterioration and failure). Because of this, the gutters and supporting structure are badly rotted, as well as many of the brackets and mouldings on the entablature. The brick and stucco behind the entablature are also deteriorating and spalling. While some of this damage to the building can be attributed to age, the majority of the damage to the building could have been prevented with proper maintenance, most notably the presence of a regular painting schedule. Any wooden portions of a building, especially one exposed to the severe wind and rain that we have in Oregon, will fall into rapid decay without protection; i.e. paint, stain, or varnish. It is imperative that buildings receive a *regularly* scheduled paint job; even the best paint job will last ten years at best.

Tower bracket before restoration. Below:Same corner with new bracket trim.

The restoration began with the erection of scaffolding with five different levels that allowed total access to all portions of the building undergoing restoration. The upper portion of the scaffolding was wrapped in a modular weather enclosure made of reinforced waterproof vinyl resistant to UV degradation. This weather enclosure allows the restoration to proceed year round, and because the enclosure is modular, it can be re-used on future restorations. Once the enclosure was up and the building protected, the lead paint could be removed from the building.

The original coating of paint on the woodwork was sand paint, meant to simulate stone. With subsequent layers of paint added by paint crews over the years, the lead paint was approximately 3/32" thick. Because of the intricate nature of the woodwork, the only option for stripping the paint was with heat guns. Although alternate methods such as torch and chemical stripping were considered, they were discounted because of the detrimental effects they would have on the building. Torch stripping was rejected because of the chance of fire, and chemical stripping was eliminated because of environmental hazards as well as the salts left in the woodwork. While heat stripping with heat guns is very labor intensive, as well as very slow considering the difficulty in removing the sand paint, it is still cost effective when one factors in the end result: intricate woodwork saved and ready for repainting. As long as the proper safety precautions are taken to minimize the risk of lead exposure to workers, i.e., the wearing of full Tyvek

Bullseye showing lead paint failure. Below: Bullseye and parapet with new metal plate.

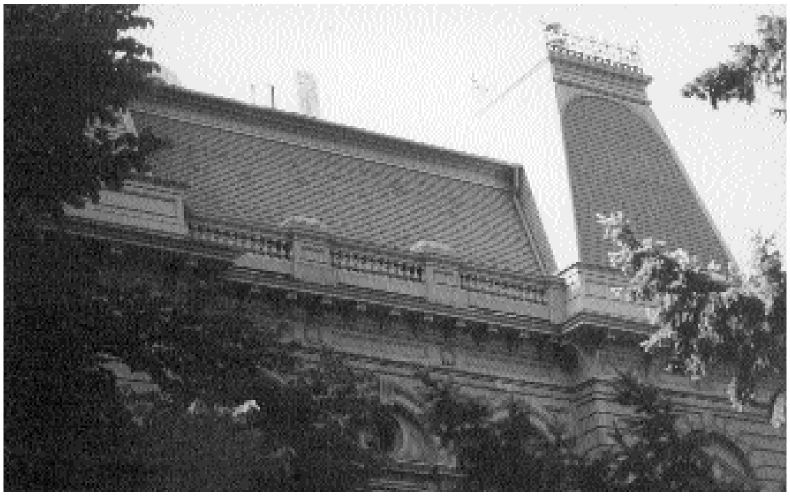


body suits, respirators, and gloves, the process is still the best for removing lead paint.

Once the paint was stripped from the building, demolition could begin. The terne plate was removed on the parapet and the gutters, exposing the deteriorated structure. The woodwork was also removed and stamped with numbers corresponding to its location on the building. As it was removed, the woodwork was separated into three classes: (1) badly deteriorated and needing to be replaced; (2) damaged but repairable with epoxy fillers and patching; (3) those pieces in good condition. A list was made of those pieces of woodwork needing replacement, and those pieces were subsequently milled and shaped, with stock that matched the grain of the original piece. All milled replacement pieces were first treated with *Woodlife Preservative*, and then primed. The pieces needing repair were cleaned and prepared for consolidation and filling with epoxy resins. The products used for these procedures were *Abatron Liquid Wood* for consolidation, and *Abatron Epoxy Filler* for the replacement of missing wood. Although these are non-reversible processes, the advantages outweigh the drawbacks. The original piece is saved, with the original craftsmanship still intact. If, for some reason, the epoxy fails in the future, the original piece is still there to replicate. Many milled pieces on the building were crudely cut with axes when installed, and by saving them with consolidant/fillers we are able to pass this information on to future generations.

Once the lead paint removal and demolition were complete, the meticulous rebuilding of the structure could begin. Like all other forms of construction, restoration is a linear process, with work completed in sequence, and the key to a successful restoration is the proper scheduling of these sequences. The rebuilding began with the entablature/lower cornice and gutters since much of the future work depended on having the gutter metal installed. The gutter is supported by both the entablature brackets, as well as 4' lookouts that run horizontally into the masonry structure. Nearly half of the lookouts were badly deteriorated and were replaced in kind with Douglas Fir. Much of the original fir tongue and groove soffit sheathing was also deteriorated and was replaced in kind with stock milled in our shop. Most of the gutter boards were in reasonable condition, and those that were not were again replaced in kind with milled tongue and groove. The deteriorated and missing brackets in the entablature were repaired and replaced in-kind with cedar and re-installed using plated deck screws instead of nails. This was done to both facilitate future removal, as well as add some seismic stability to the brackets. Before the restoration, the brackets had an occasional tendency to fall off the building.

The gutter originally sloped slowly from the center of the south facade to a downspout on the east facade, a run of about 60'. Because the gutter settled and sagged over the years, the slope was zero in some places, and even negative in others. Because of the need to have a continuous and sufficient slope, a plywood cricket was built over the original gutter sheathing. This cricket allowed an additional three inches to the height, and resulted in a slope of 1/8" per foot run. The impact of the higher profile of the gutter was mitigated by adding a cant strip that sloped up from the front edge of the gutter to the beginning of the cricket. These additions may seem drastic to some, but all of our



Restored north facade of Villard Hall.

Photos by George Bleekman III.

intervention is reversible, easily discernable from the original gutter that lies beneath it, and is impossible to see from anywhere except on top of the building. The gutter metal was then installed, using long sheets of break-formed (to minimize seams) stainless steel terne plate.

With the completion of the gutter, work could proceed on the parapet and the mansard roof shingling. Although the parapet is very exposed to inclement weather, deterioration was limited to the skirt boards and the ornamentation over the south and east bulls eyes. The skirt boards on the parapet were badly weathered and replaced in-kind with 1x12 clear cedar, and the keystones and flanking scrolls over the bulls eyes were also replaced in-kind with cedar. The top of the parapet was then flashed with stainless steel terne plate. The shingles used for the re-roofing matched the original cedar shingles in both width and length. Before placement on the building, the shingles were hand dipped in *WoodLife Wood Preserve,* allowed to dry for three days, and then dipped in a Fuller O'Brian alkyd primer. Great care was taken to dry the shingles before dipping, which facilitates paint adhesion. The shingles were then hung on the building, duplicating the original courses, which had been marked as the old shingles were pulled off.

At this writing, work is continuing on building with the re-introduction of the balustrade, which had badly deteriorated and was removed in the 1930s. The balustrade runs along the lower cornice of the mansard roof, and ties the four towers together by continuing the parapet lines across the roof. Broken into three equal segments by two large pedestals, each run of the balustrade features a boxed top and bottom rail trimmed with cedar, and turned cedar balusters spaced 4" apart. The two pedestals will support large urns, although at this point the original material of the urns is unknown and will require further study in order to replicate them. Supporting the balustrade is a steel structure that attaches to the mansard roof, allowing the balustrade to hang from the structure and keeping the balustrade out of the gutter. When completed, the top rail of the balustrade will be capped with stainless steel flashing.

Work will continue on the building until the restoration is complete. After the balustrade is finished, the upper cornice of the tower and mansard roof will be completed. The tower will be roofed with stainless steel terne plate, and by early June, the building will be ready for paint, and if properly planned for, paint preparation can be spread throughout the course of the restoration. All replacement pieces are treated with *Woodlife* and primed on all surfaces before they are placed on the building, and all the original woodwork is treated with *Woodlife* after scraping or sanding during each phase of the project. All upper and vertical joints are caulked with *Vulkum* Urethane caulk (with the bottom joints left open to allow water to escape). A urethane caulk is far superior to an acrylic latex, especially in exterior applications. Although a urethane caulk is harder to work with, the extra time spent is well worth the effort. By taking the time to prep as you go, you are spared the lengthy process of prepping an entire building at the end of a long restoration. The building will receive two coats of an alkyd primer, and then two top coats. The trim will be painted with sand paint, and the shingles a dark grey to simulate slate. The sand paint is applied by spraying on a layer of paint, and then spraying the surface with a low pressure sandblaster. This gives a much different appearance than one would get if the sand were mixed into the paint and then applied.

The final touch to the restoration will be the installation of the cast iron cresting around the top of the tower and mansard roof. The cresting was carefully removed and numbered during the early part of the restoration. The broken pieces were repaired by cutting out pieces of cast iron from bathtubs, and then welding the pieces to the cresting. After repair the cresting was sandblasted and then powdercoated with a color matching the original black (powdercoating was chosen over a catalytic epoxy because of the durability of the powdercoating). The cresting will be installed and we will celebrate the end of a very satisfying and meaningful restoration project. Yet the celebration will be short lived because the scaffolding will soon move around the building, signifying the beginning of another phase. It is something we all look forward to, both students and crew alike.

George Bleekman holds a Masters Degree in Architecture from the University of Oregon, and is currently writing his thesis for the Masters Degree in Historic Preservation.